CLAIMS

1. A fusion polypeptide, comprising

a) a peptide of 3 to 30 amino acids capable of selectively binding the fusion polypeptide to tumor vessel endothelial cells; and

b) a tissue factor (TF) or a fragment thereof, the tissue factor and the fragment being characterized in that they are able to activate blood clotting when the fusion polypeptide binds to tumor vessel endothelial cells,

wherein the peptides a) and b) are coupled to one another either directly or via a linker having up to 15 amino acids, characterized in that the peptide capable of selectively binding the fusion polypeptide to tumor vessel endothelial cells is coupled to the C-terminus of the peptide capable of activating blood clotting upon binding of the fusion polypeptide to tumor vessel endothelial cells.

2. The fusion polypeptide according to claim 1 consisting of the peptides a) and b) and a linker having up to 15 amino acids.

3. The fusion polypeptide according to claim 1 wherein the peptides a) and b) are coupled to one another directly.

4. The fusion polypeptide according to one of claims 1 to 3, characterized in that the peptide capable of activating blood clotting upon binding of the fusion polypeptide to tumor vessel endothelial cells is the tissue factor TF, which has the sequence shown in SEQ ID NO:1.

5. The fusion polypeptide according to one of claims 1 to 3, characterized in that the peptide capable of activating blood clotting upon binding of the fusion polypeptide to tumor vessel endothelial cells is a fragment of the tissue factor TF, which preferably has the sequence shown in SEQ ID NO:2.

6. The fusion polypeptide according to one of claims 1 to 5, characterized in that the peptide of 3 to 30 amino acids capable of selectively binding the fusion polypeptide to tumor vessel endothelial cells, has a linear or cyclic structure.

7. The fusion polypeptide according to one of claims 1 to 6, characterized in that the peptide of 3 to 30 amino acids capable of selectively binding the fusion polypeptide to tumor vessel endothelial cells, comprises the amino acid sequence RGD or NGR.

8. The fusion polypeptide according to claim 7, characterized in that the peptide capable of selectively binding the fusion polypeptide to tumor vessel endothelial cells is selected from the group comprising GRGDSP and GNGRAHA.

9. The fusion polypeptide according to claim 7, characterized in that the peptide capable of selectively binding the fusion polypeptide to tumor vessel endothelial cells is selected from the group comprising GCNGRCG, GCNGRCVSGCAGRC, GCVLNGRMEC and GALNGRSHAG.

10. The fusion polypeptide according to claims 1 to 9, characterized in that it has one of the sequences shown in SEQ ID NO:3-8.

11. A nucleic acid encoding a fusion polypeptide according to one of claims 1 to 10.

12. The nucleic acid according to claim 11, characterized in that it has one of the sequences shown in SEQ ID NO:10-15.

13. A vector comprising a nucleic acid according to claim 11 or 12.

14. A cell comprising a nucleic acid according to claim 11 or 12 or a vector according to claim 14.

15. A pharmaceutical composition comprising a fusion polypeptide according to one of the claims 1 to 10, a nucleic acid according to claim 11 or 12, a vector according to claim 13 or a cell according to claim 14.

16. The pharmaceutical composition according to claim 15, which further comprises pharmaceutically acceptable carriers, excipients or adjuvants.

17. Use of a pharmaceutical composition according to claim 15 or 16 for the treatment of neoplastic diseases.

18. The use according to claim 17, characterized in that the neoplastic disease is selected from the group comprising bronchial carcinomas and other tumors of the thorax and mediastinum, breast cancers and other gynecological tumors, colorectal carcinomas, pancreatic carcinomas and other tumors of the gastrointestinal tract, malignant melanomas and other tumors of the skin, tumors in the head and neck region, prostate cancers and other urogenital tumors, sarcomas, endocrine-active tumors, leukemias and Myelodysplastic Syndromes and Hodgkin lymphomas and non-Hodgkin lymphomas.